IP-B9515SNTLA User Manual

1 INSTALLATION

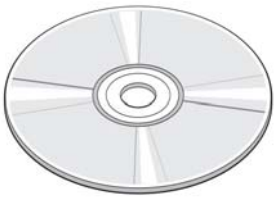
1.1 Minimum System Requirements

CPU	Pentinum 4 2.4GHz and above
Hard Disk	40 GB or above
Memory	256 MB or above
Operating System	Windows XP with SP2 or above
Video Resolution	SVGA or XGA with 1024x768 resolution

1.1.1 Product and Accessories

IP-B9515SNTLA Body

Manual & S/W CD

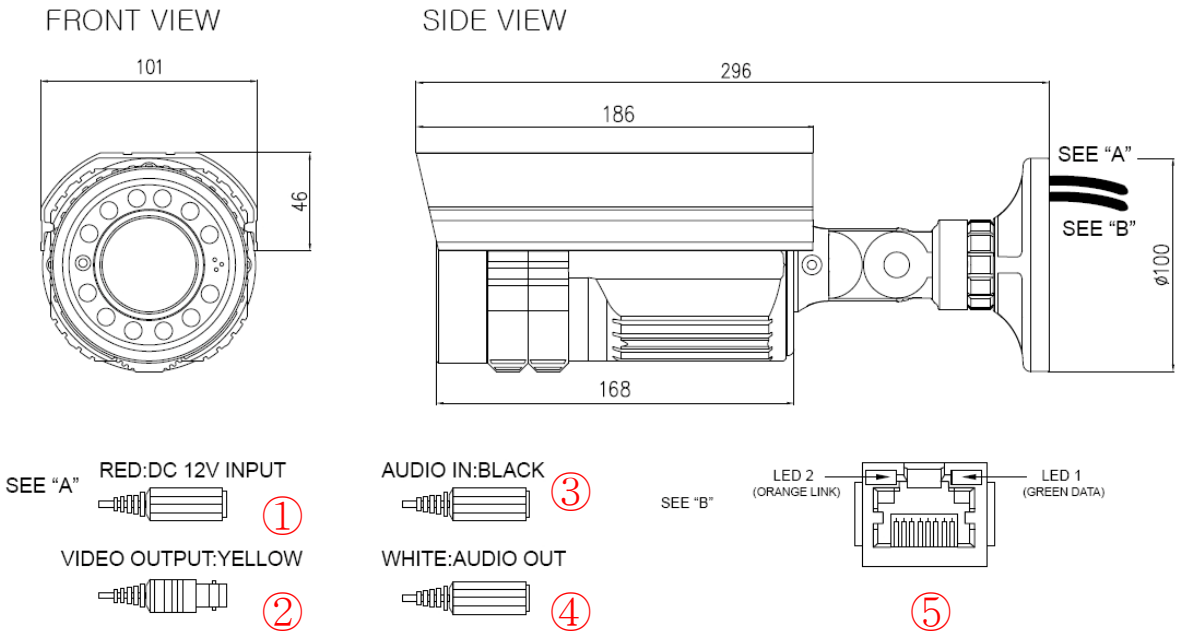


Cross LAN Cable

Accessory Pack

<Picture 1> Product and Accessories

1.1.2 Physical Description



1. Power Input

   12 Volts DC: Please follow the instructions on the connector

2. Analog Video Output

   The Camera Supports 1 channel of analog video output

3. Audio Input

   Sensitivity:-42dB±3dB(0dB=1V/Pa at 1KHz)

   S/N Ratio:More than 58dB

   Directivity:Omni directional

4. Audio Output

   The IP device supports audio output with earphone jack

5. Ethernet Port:

   The camera connects to the Ethernet via a standard RJ45 connector and can auto detect the speed of the local network segment (10Base-t/100Base-TX Ethernet).

1.2 Preparation before setup

To configure your IP device, you have to use the Internet Explorer to login. Before that, your PC's networks settings and the IP device's IP address must be setup. Make sure all the connections are connected correctly, and then follow the procedures below to setup.

1. **Setup your PC network**
   You have to match your PC's TCP/IP setting with the IP device's default settings before you can use IE browser to login it. This section tells you how to setup your PC's TCP/IP settings.
2. **Setup IP device's IP address**
   This IP device's IP address can be setup manually or automatically by network service (DHCP). If it acquires the IP address by using the DHCP service, please use the IP utility software bundled in the product CD to search all the IP devices' IP address.

1.2.1 Setup your PC network

To set up the network of IP device via a PC, you have to change the TCP/IP settings of the PC.

The following are the default network settings of IP device.

IP Address: 192.168.0.100

Subnet Mask: 255.255.255.0

To access the IP device, the IP address of the PC should match the address below.

IP Address: 192.168.0.xxx

Subnet Mask: 255.255.255.0

NOTE: xxx should be a number from 1 to 254, but 100 is excepted.

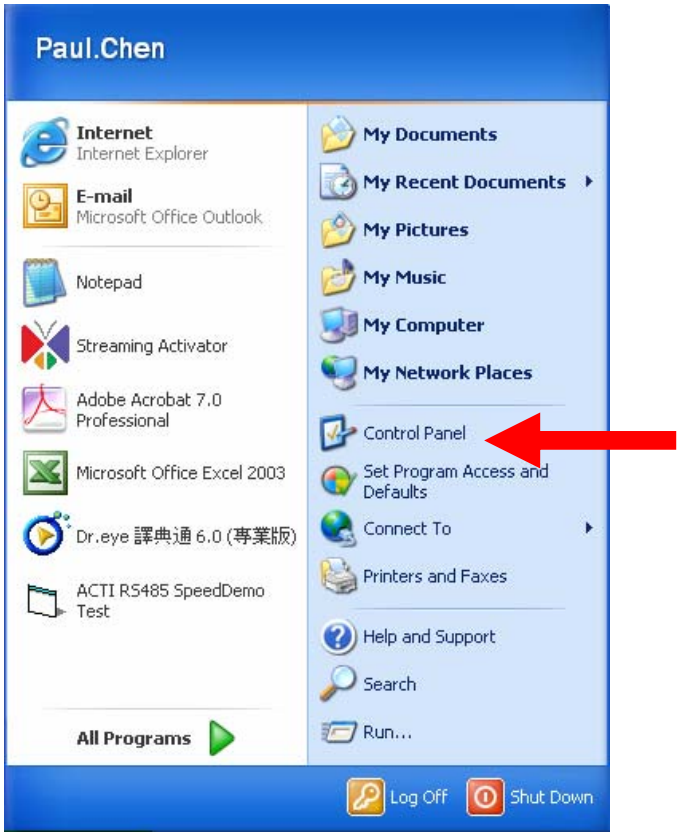
The procedures below is the setup procedure of a PC using Windows XP as its OS. When running an OS other than Windows XP, please refer to the manual included with the OS.

- **STEP1**

  Start up your PC.

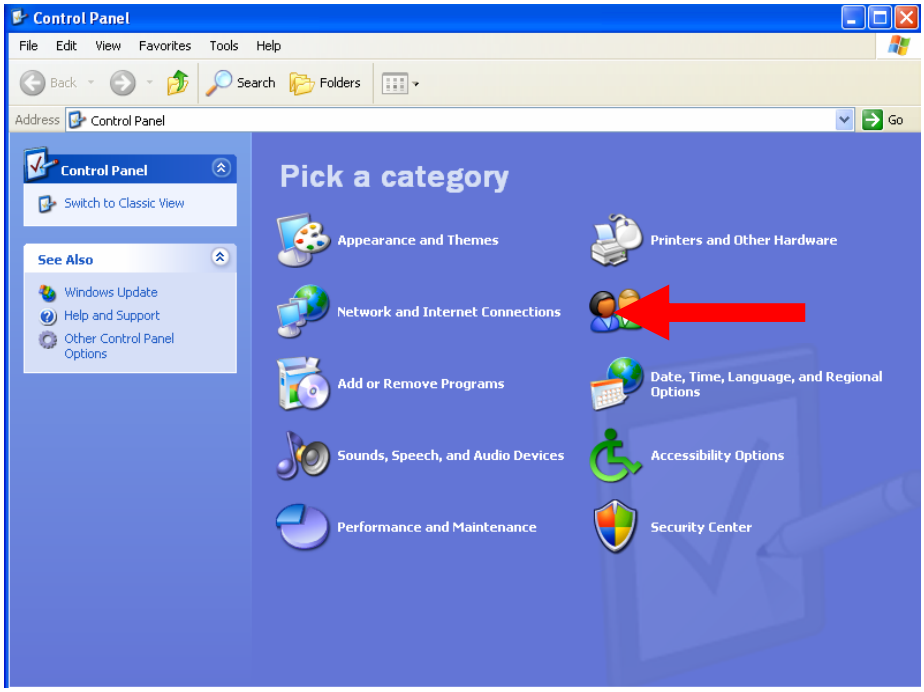
- **STEP2**

  Click the [Start] and select the "Control Panel"



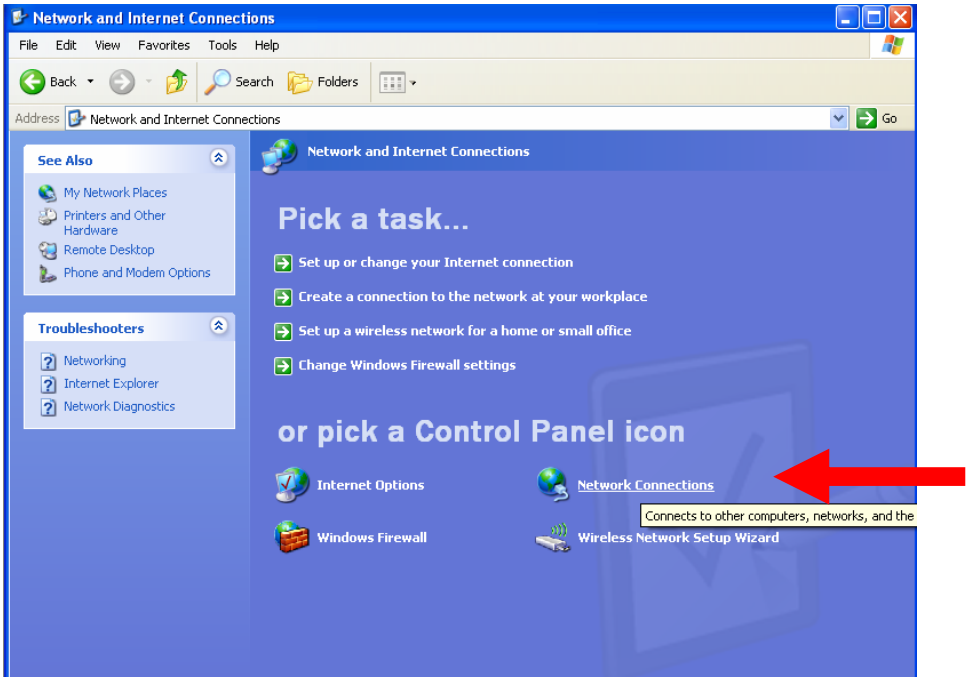
- **STEP3**

  Double-click the "Network and Internet connections" icon.



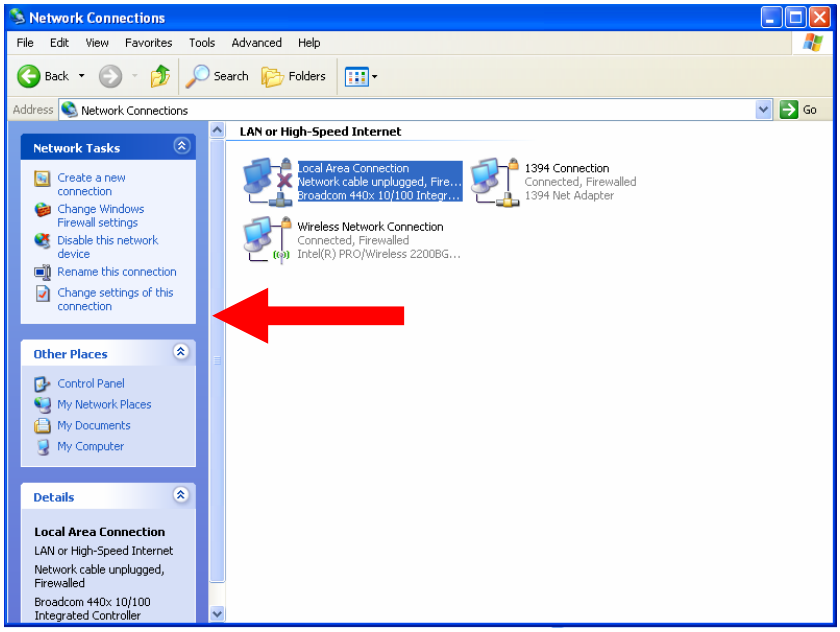
- **STEP4**

  Double-click the "Network connections" icon



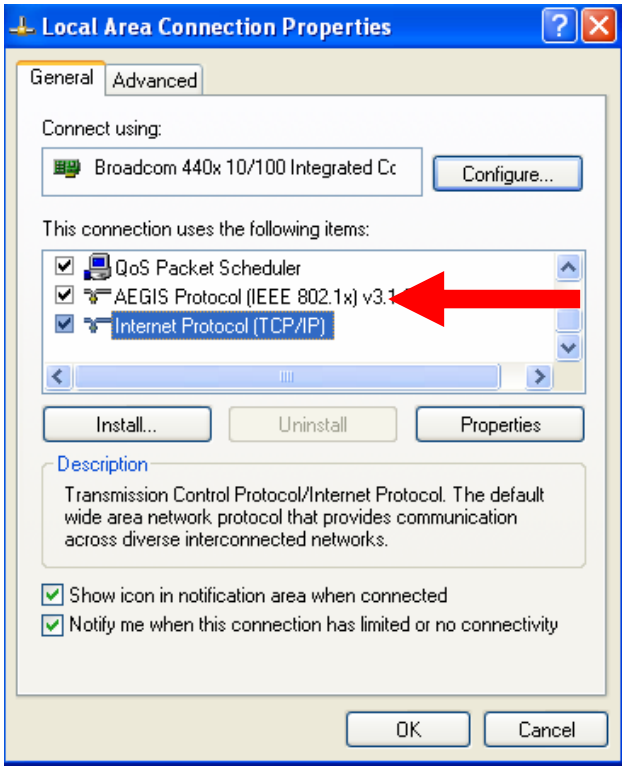
- **STEP5**

  Click “Local Area Connections”, and then click “Change settings of this connection” in the network Task menu.



- **STEP6**

  Click “Internet Protocol (TCP/IP)”, and then click the [Properties] button.



1.3 Configuring the IP device

This section describes how to configure the IP device. The product administrator has unlimited access to all setup windows and normal users can only watch the live image. The IP device is configured under a standard browser (Microsoft Internet Explorer 6.0 or above).

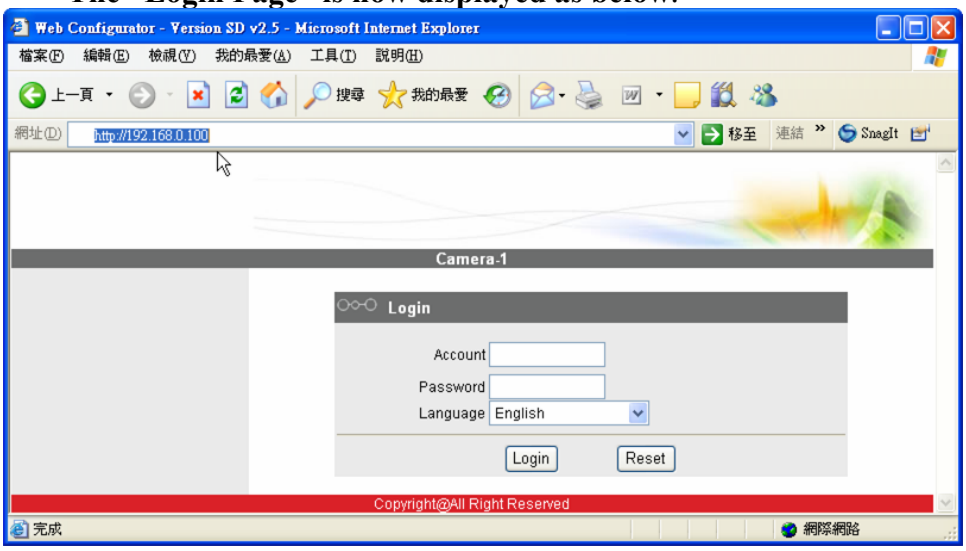
Follow the procedures below to configure the IP device.

- **STEP1:** Open a browser

- **STEP2**: Enter the IP address of the IP device.

  The default IP address is “192.168.0.100”

  The “Login Page” is now displayed as below.



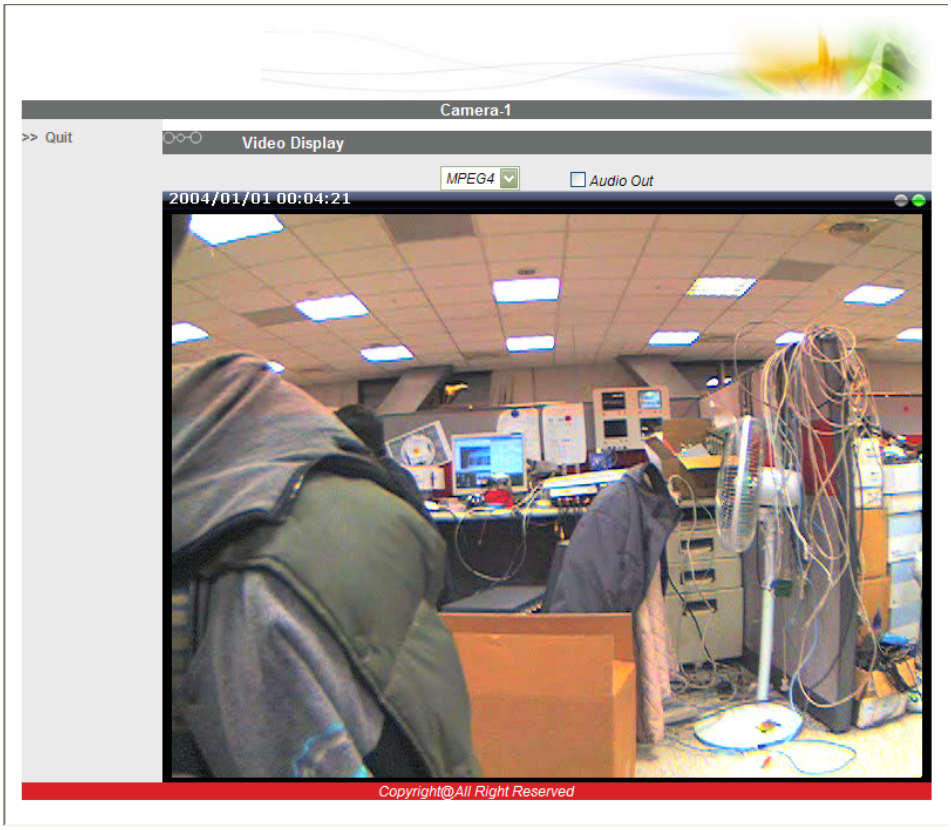
- **STEP3:** Enter the Account name (factory default: Admin) and the Password (factory default: 123456).

NOTE: Internet Explorer of 6.0 or above is highly recommended. If you don’t have the it, please download it from http://www.microsoft.com/windows/ie/downloads/default.mspx

- **STEP4**: Select the language of the IP device user interface. You can select from English, Traditional Chinese, Simplified Chinese, Japanese, Spanish, Italian, German, Portuguese,Czech and French. This user interface setting will disappear once you log out, if you want to change the default user interface language, please change the setting of [Host setting] after login successed.

- **STEP5**: Click the Login button to login or click the Reset button to re-enter again.

Once successfully login, the “Video Display page” will be displayed as below.

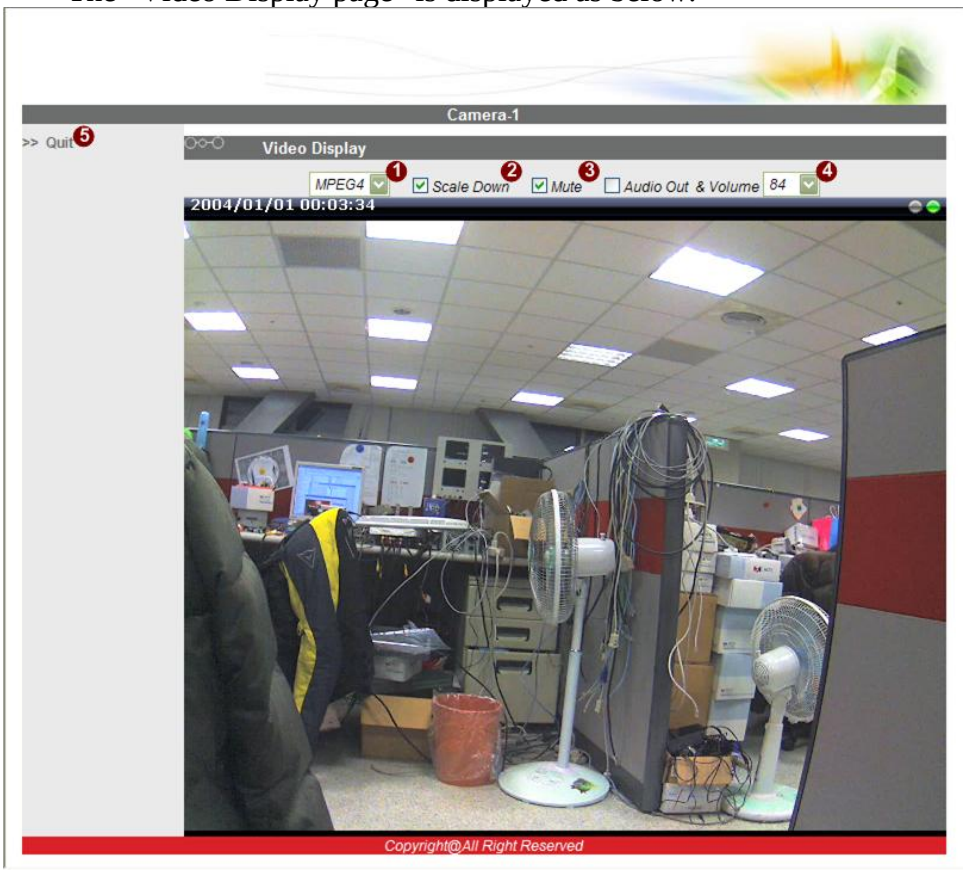


1.3.1 Video Display

This section tells you how to view live images via Internet Explorer.

- **STEP1**: Click the [Video Display] on the "Main Setup page".

  The "Video Display page" is displayed as below.



- **STEP2**: Check the ❶ [MPEG4/MJPEG] to Select the Compression type. Once selected, the video server/IP camera will start to stream with new compression type.

- **STEP3**: Click the ❷ [Scale Down] checkbox to scale down the SXGA(1280x1024)/720P(1280x720) to VGA resolution.

- **STEP4**: Check the ❸ [Mute] checkbox to mute or display audio from the video server/IP camera.

- **STEP5**: Click the ❹ [Audio Out] checkbox to enable/disable audio transmission from this PC to IP device's audio out and change audio out volume. Ex: while this function enabled you can talk to the people at the IP device site.

- **STEP6:** Click the  [Quit] to exit the live view and return to “Main Setup page”.

-

NOTE: If the streaming is disabled, you cannot see the live images here.

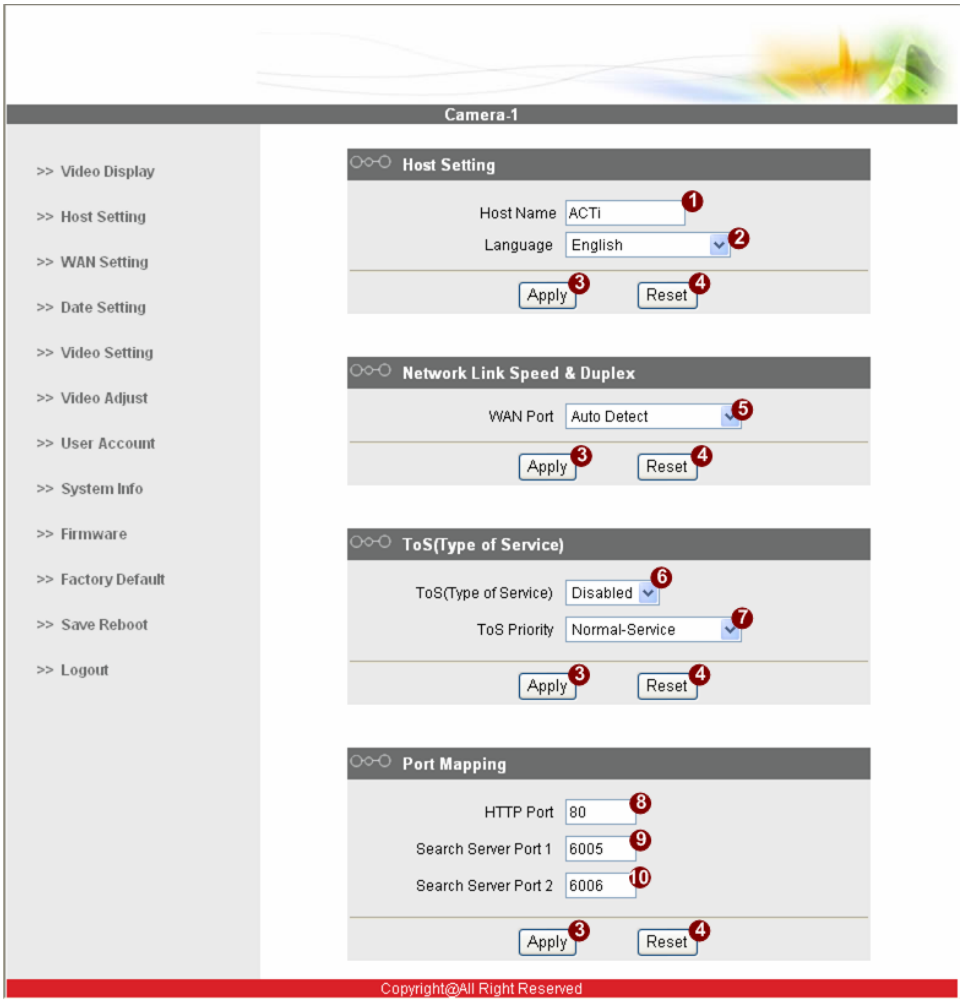
NOTE: Be sure to set the Network Connections Type to Auto Negotiation to respective apparatus connected to this IP device via network. Otherwise, the maximum transmission performance might not be achieved. This is because the IP device follows MII standard.

1.3.2 Host Setting

This section tells you how to setup IP device's host settings and LAN settings.

- **STEP1**: Click the [Host Setting] on the "Main Setup page".

  The "Host setting page" is displayed as below.



- **STEP2:** Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■Host Setting

Parameters	Description
❶ Host name	Enter a host name, and this host name will be shown when you use the IP utility or the SDK to search for the IP device.
❷ Language	Select the language of default user-interface. Each user login will see the default user-interface first.

■Network link speed & duplex

Parameters	Description
❺ WAN port	This item lets you select the network transmission speed of WAN port. You can select from 1. **Auto detect** (default setting) 2. **100Mbps / Full duplex** 3. **100Mbps / Half duplex** 4. **10Mbps / Full duplex** 5. **10Mbps / Half duplex**

■Port Mapping

Parameters	Description
❻ TOS (type of service)	Select whether to add the TOS tag onto the streaming data. Streaming data with a higher priority TOS tag will be transmitted first while compared with other data to be transmitted.
❼ TOS priority	Select the TOS tag's priority to be added onto the streaming. You can select between 1. **Normal-Service** 2. **Minimize-Cost** 3. **Maximize-Reliability** 4. **Maximize-throughout** 5. **Minimize-Delay**

■ToS (Type of Service)

Parameters	Description
❽ HTTP port	Select the port for this IP device to use HTTP protocol.
❾ Search server port1	Select the port1 for this IP device to support search function of the application program (eg. IP utility).
❿ Search server port2	Select the port2 for this IP device to support search function of the application program (eg. IP utility).

- **STEP3**: Click the ❸ [Apply] button of each setting to confirm the settings or click the ❹ [Reset] button to re-enter the parameters.

NOTE: Once finished all settings, be sure to click the [Save Reboot] button, otherwise, some settings won't take effect.

NOTE: Check with your system administrator, if Client PC and IP device are setting in different VLANs, please connect to WAN port.

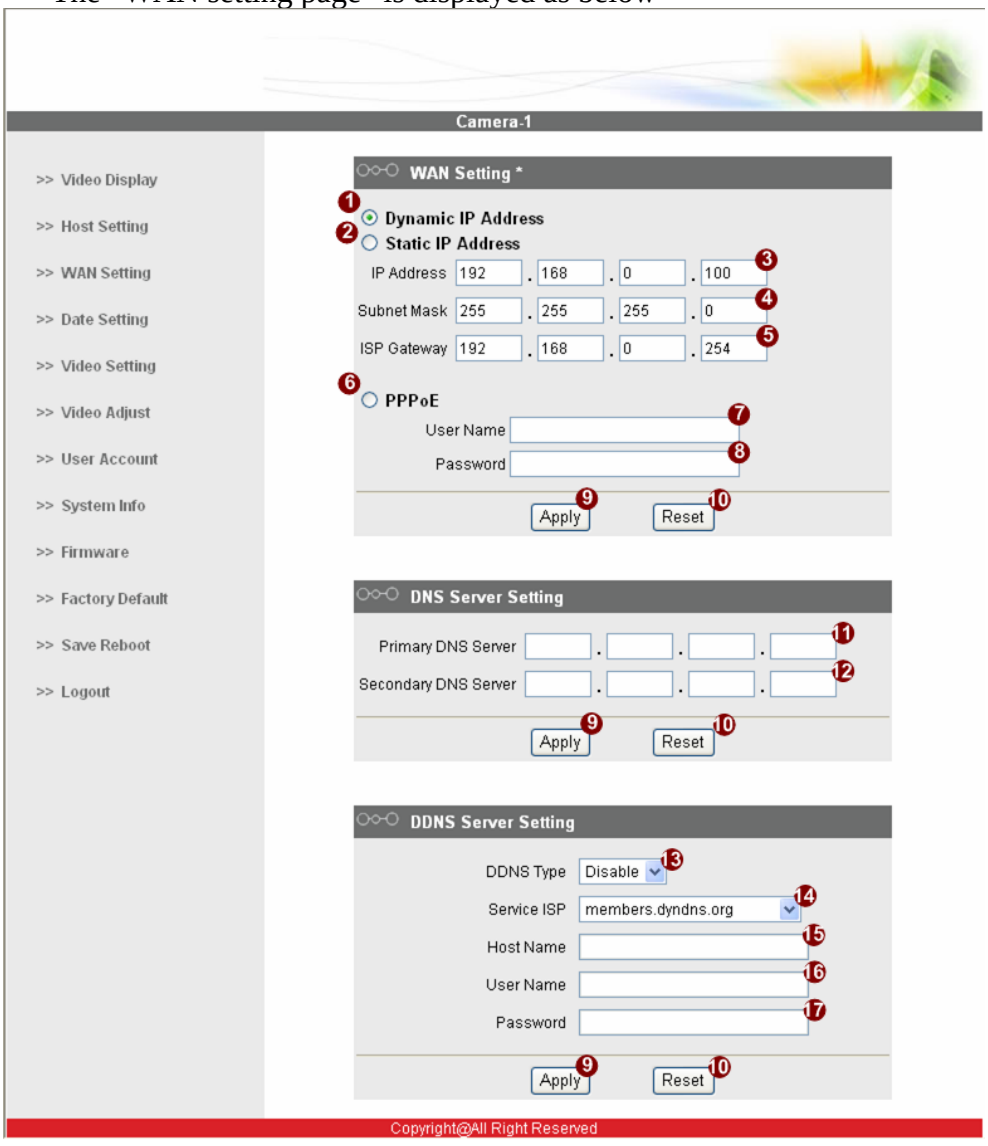
NOTE: Be sure to set the Network Connections Type to Auto Negotiation to respective apparatus connected to this IP device via network. Otherwise, the maximum transmission performance might not be achieved. This is because the IP device follows MII standard.

1.3.3 WAN Setting

This section tells you how to setup IP device's WAN, DNS server and DDNS server settings.

- **STEP1**: Click the [WAN Setting] on the "Main Setup page".

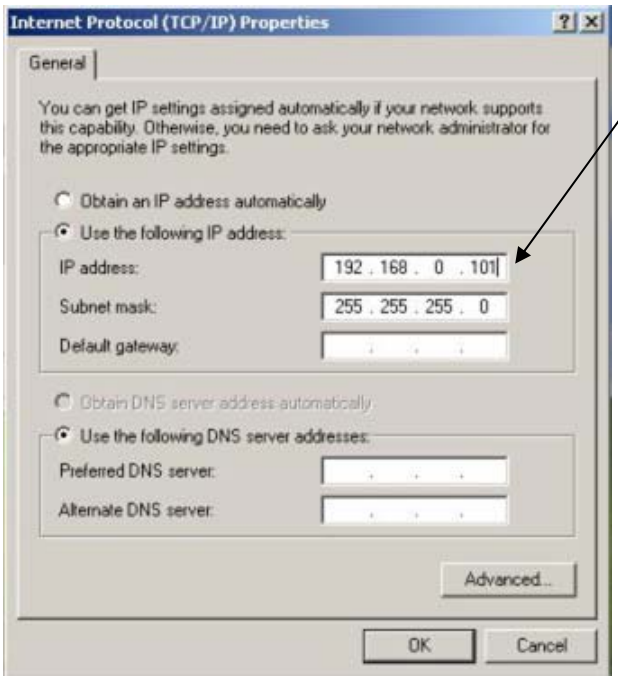
The "WAN setting page" is displayed as below



- **STEP2**: Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

- **STEP7**

Click the “Use the following IP address” radio button and enter the IP address and the subnet mask.



Please set the settings as below.

IP address: 192.168. 0.xxx
Subnet mask: 255.255.255. 0

(**NOTE**: xxx should be a number from 1 to 254, but 100 is excepted.)

- **STEP8**

Click the [OK] button and the window dialog box closes.

■WAN Setting

Parameters	Description
❶ Dynamic IP address	Click this to enable IP device's DHCP function. It will acquire its WAN port IP address from a DHCP server within the same network. (You must have a DHCP server in order to enable this function.)
❷ Static IP address	Click this to manually enter the IP device WAN port IP address. ❸**IP address**: Enter the WAN port IP address. ❹**Subnet mask**: Enter the subnet mask of WAN port. If IP address is changed, adjust the subnet mask accordingly. ❺**ISP gateway**: Enter the IP address of the gateway (the router).
❻ PPPoE	Click this when you connect IP device directly to the xDSL modem. ❼**User name**: Enter the user name of your xDSL account. ❽**Password**: Enter the password of your xDSL account. **Note**: You have to click the [Save Reboot] after you click the [Apply button] to let this IP device start xDSL connections.

■DNS server Setting

Parameters	Description
⓫ Primary DNS server	Defines the IP address of the primary DNS server. This is used for identifying this computer by name instead of IP address.
⓬ Secondary DNS server	The IP address of the secondary DNS server. It will be used once the primary DNS server fails.

■DDNS server Setting

Parameters	Description
⓭ DDNS type	Click this to enable IP device's DDNS function. DDNS function enables user to connect to this IP device by domain name even if its IP address is not static.
⓮ Service ISP	Click one of the DDNS service providers. You can visit their website to get a DDNS service account for this IP device.
⓯ Host name	Enter the host name of your DDNS service account. (ex: xxxx.dyndns.org)
⓰ User name	Enter the user name to login your DDNS service account.
⓱ Password	Enter the password to login your DDNS service account.

- **STEP3**: Click the ❾ [Apply] button of each setting to confirm the

settings or click the ⑩ [Reset] button to re-enter the parameters.

NOTE: Check with your system administrator, if Client PC and IP device are setting in different VLANs, please connect to WAN port.

NOTE: Once finished all settings, be sure to click the [Save Reboot] button, otherwise, some settings won't take effect.

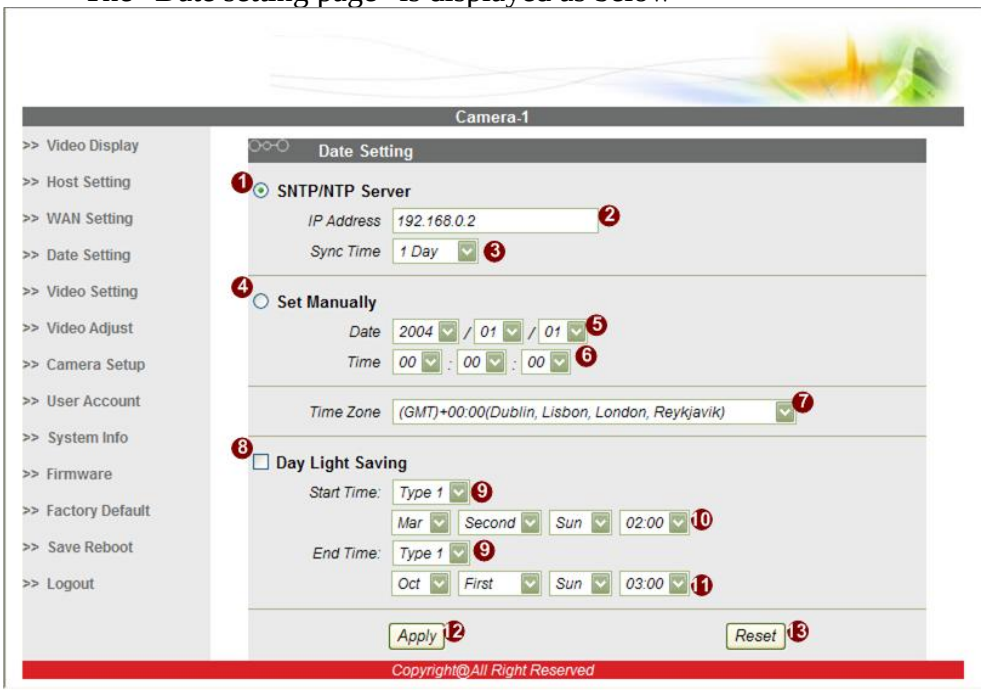
NOTE: Be sure to set the Network Connections Type to Auto Negotiation to respective apparatus connected to this IP device via network. Otherwise, the maximum transmission performance might not be achieved. This is because the IP device follows MII standard.

1.3.4 Date Setting

This section tells you how to setup IP device's date and time settings.

- **STEP1**: Click the [Date Setting] on the “Main Setup page”.

  The “Date setting page” is displayed as below



- **STEP2**: Configure these settings with reference to the table below. If you are still unsure what to set, contact your system administrator.

■Date Setting

Parameters	Description
❶SNTP/NTP server	Click this to enable IP device’s SNTP/NTP function. SNTP/NTP function enables this video to synchronize its time settings with a SNTP/NTP server. You can use this function to make sure all your IP devices’ time is the same. Additionally, with our embedded digital-time-code in the streaming, you can tell the event sequence accurately. ❷**IP address**: Enter the IP address of the SNTP/NTP server. ❸**Sync time**: Select the time interval for this IP device to synchronize its time.
❹Set manually	Click this to manually setup the date & time. ❺**Date** : Select the date ❻**Time**: Select the time
❼Time zone	Select the time zone offset for local settings
❽Day Light Saving	❾ Select Type 1 to specify daylight saving time by week number in a month; select Type 2 to specify daylight saving time by date. ❿**Start Time** : Select the daylight savings start time.

	⓫ **End Time** : Select the daylight savings end time.

- **STEP3**: Click the ⓬ [Apply] button of each setting to confirm the settings or click the ⓭ [Reset] button to re-enter the parameters.

NOTE: Once finished all settings, be sure to click the [Save Reboot] button, otherwise, some settings won't take effect.

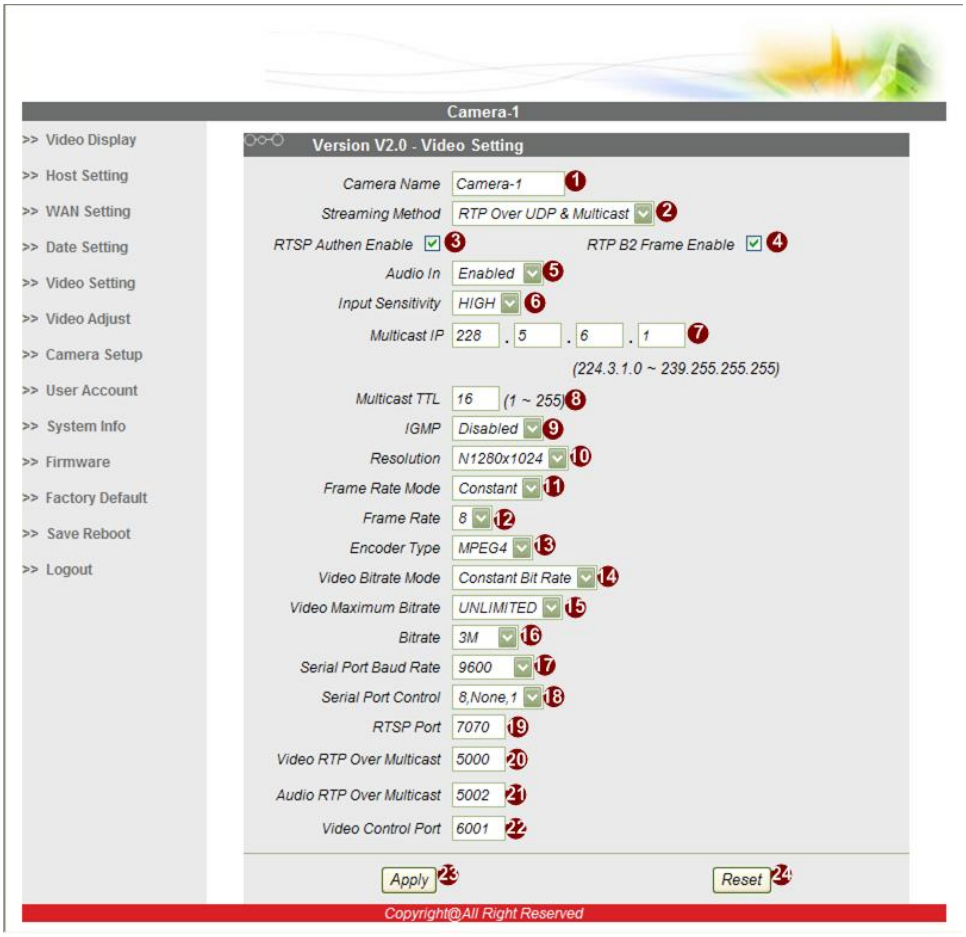
Manually set date and time will be gone, if power off.

1.3.5 Video Setting

This section tells you how to setup IP device's video and streaming settings.

- **STEP1**: Click the [Video Setting] on the "Main Setup page".

  The "Video setting page" is displayed as below



■Video setting

Parameters	Description
1 Camera name	The camera name is reserved for customer use.
2 Streaming Method	Select the streaming mode. 1. **TCP only** 2. **Multicast only** 3. **RTP Over UDP** 4. **RTP Over Multicast** 5. **RTP Over UDP & Multicast**
3 RTSP Authen Enable	Checkbox to enable RTP streaming's Account/Password authentication.

4 RTP B2 Frame Enable	Checkbox to enable the B2 frame in RTP streaming
5 Audio	Select enable or disable the audio function.
6 Input Sensitivity	Select HIGH or LOW of the audio input sensitivity
7 Multicast IP	Select the multicast IP. Default settings is 228.5.6.1
8 Multicast TTL	Select the multicast TTL. Defualt setting is 255.
9 IGMP	Select video type connected to the video-in of this IP device. If you use an incorrect video type, some images might be lost.
10 Resolution	Select the video resolution of the IP device.
11 Frame rate mode	Select the frame rate mode. **Constant**: The streaming's frame rate remains constant at all conditions. **Variable**:: The streaming's frame rate will variants according to the images variability to keep the image quality good.
12 Frame rate	Select the frame rate of the video streaming.
13 Encoder Type	Select the encoder's compression type. 1. MPEG4 2. MJPEG
14 Video Bitrate Mode	Select the video bitrate mode. **Constant Bit Rate**: The streaming's bitrate remains constant at all conditions. **Variable Bit Rate**:: The streaming's bitrate will variants according to the images variability to keep the image quality good.
15 Video Maximum Bitrate	Select the Miximum bitrate of the video straming. Designating a limited bit rate may reduce frame rate. Doing so will also disable Bit Rate setting below.
16 Bitrate	Select the bit rate of the video streaming. You can select from 28Kbps to 3Mbps. **Note**: Lower bit rate consumes less bandwidth but delivers lower quality images. High bit rate consumes more bandwidth but delivers higher quality images.
17 Serial Port Baud Rate	Select the Baud Rate setting of serial port.
18 Serial Port Control	Select the Control setting of serial port.
19 RTSP port	Select the port for this IP device to support RTSP
20 Video RTP Over Multicast	Enable/disable the multicast video streaming via RTP protocol
21 Audio RTP Over Multicast	Enable/disable the multicast audio streaming via RTP protocol
22 Video control port	Select the port for this IP device to support video control function of the application program.
● Video streaming port (TCP Only)	Select the port for this IP device to support video streaming function of the application program.
● Video multicast port (Multicast	Select the port for this IP device to support video multicast function of the application program.

Only)	

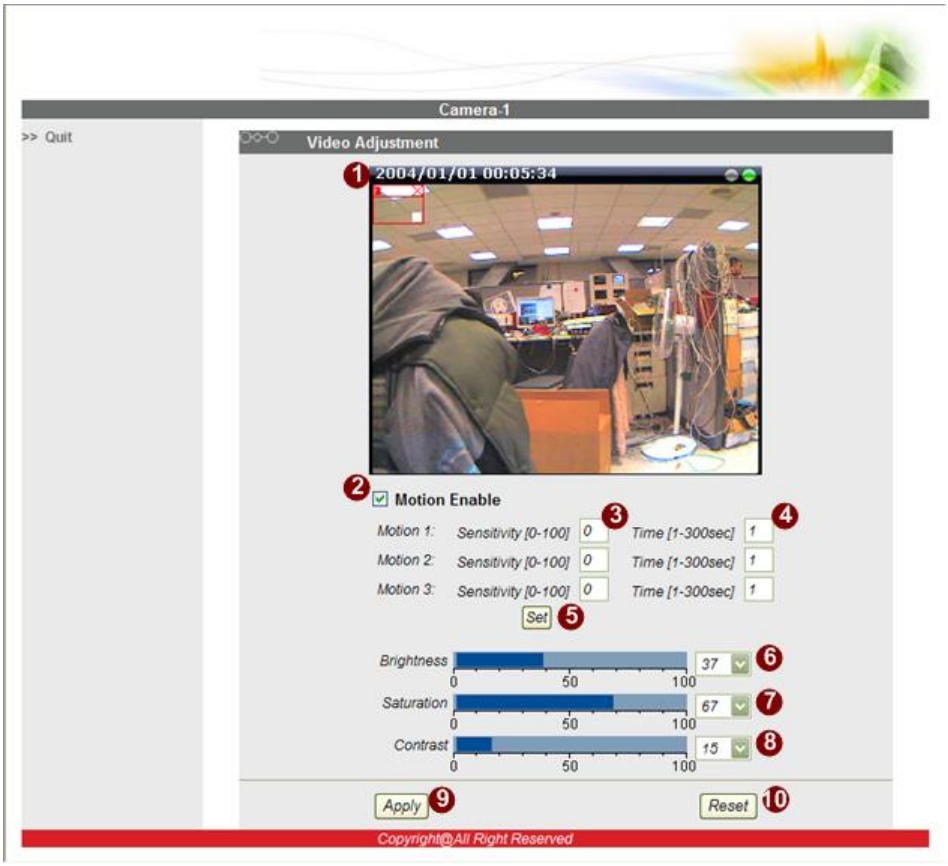
STEP3: Click the 23 [Apply] button of each setting to confirm the settings or click the 24 [Reset] button to re-enter the parameters.

1.3.6 Video Adjustment

This section tells you how to adjust the streaming video.

- **STEP1**: Click the [Video Adjust] on the “Main Setup page”.

The “Video adjust page” is displayed as below



- **STEP2**: Set the ❷ checkbox to enable motion detection function.
- **STEP3**: Set the ❸ sensitivity of motion detection windows.
- **STEP4**: Set the ❹ interval time of motion detection windows. Within the interval time after the motion detection is triggered, no motion detectioin will be triggered.
- **STEP5**: When satisfied with the motion settings, click the ❺ [Set]
- **STEP6**: Adjust the video by changing the value of ❻ “Brightness”, ❼ “Saturation” and ❽ “Contrast”. See the images displayed above for the effect of the current setting.
- **STEP7**: When satisfied with the video settings, click the ❾ [Apply]

button of each setting to confirm the settings or click the ⑩ [Reset]

NOTE: Please note that “Hue” setting doesn’t support by SuperCMOS product.

NOTE: Once finished all settings, be sure to click the [Save Reboot] button, otherwise, some settings won’t take effect.

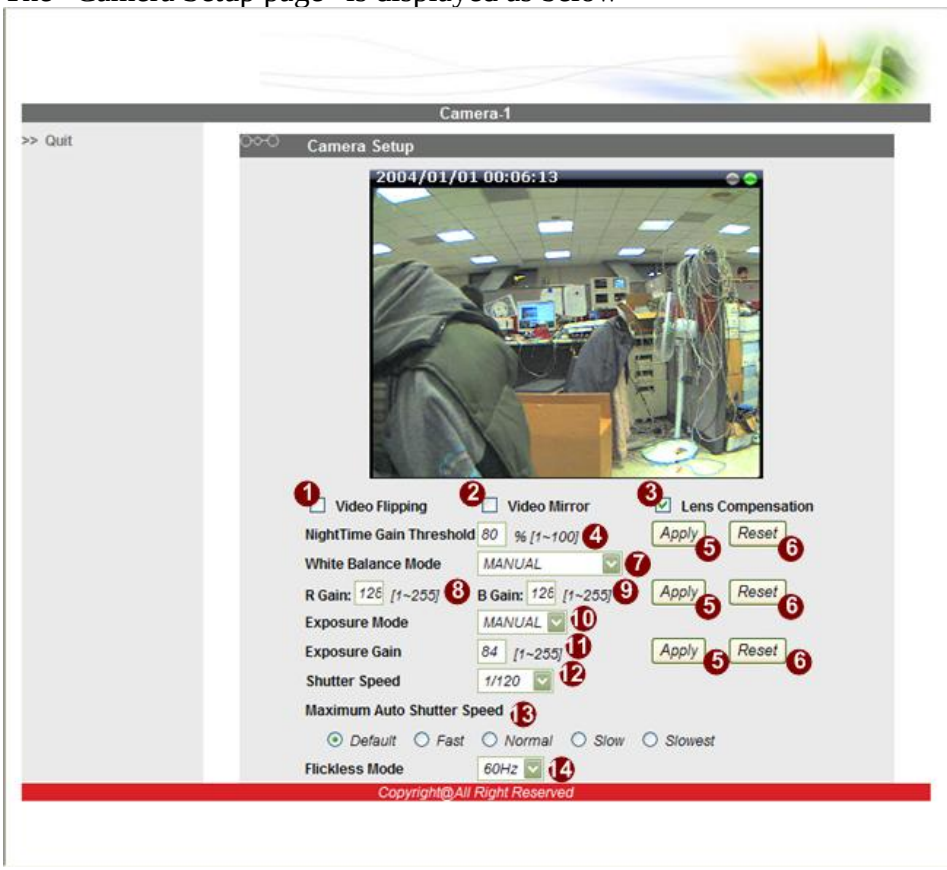
NOTE: You may find a support package for helping you on better video quality adjustment. Please visit our web site, and get the support document TS-00103.

1.3.7 Camera Setup (SuperCMOS model only)

This section tells you how to adjust the camera.

- **STEP1**: Click the [Camera Setup] on the “Main Setup page”.

The “Camera Setup page” is displayed as below



■Camera setting

Parameters	Description
1 Video Flipping	Checkbox to flip the video.
2 Video Miirror	Checkbox to mirror the video.
3 Lens Compensation	Checkbox to load the best video setting for bundled lens.
4 NightTime Gain Threshold	Select the nighttime gain threshold.
7 White Balance Mode	Select the white balance mode. After you set the parameter, you need to wait for 5~10seconds to see the final result. 1. AUTO : Auto white balance (default) 2. INDOOR1: Select the indoor white balance profile

	1. 3. INDOOR2: Select the indoor white balance profile 2. 4. OUTDOOR1: Select the outdoor white balance profile 1. 5. OUTDOOR2: Select the outdoor white balance profile 2 6. HOLD CURRENT: Select this to let the IP camera automatically obtain a best white balance setting according to current environment. The IP camera will use this setting to adjust color. NOTE: This setting will be lost after you reboot the camera. 7. MANUAL: Select this to enable manual setting of the white balance. You will need to enter the R Gain and B gain setting below.
8 R Gain (Manual White balance mode only)	Add or decrease redness to the video when under Manual White Balance mode. (This function is only available in Manual White balance mode.)
9 B Gain (Manual White balance mode only)	Add or decrease blueness to the video when under Manual White Balance mode. (This function is only available in Manual White balance mode.)
10 Exposure mode	Select exposure mode to auto or manual. - Auto: The IP camera will adjust the exposure automatically. - Manual: (In Manual White balance mode only) Manually select the Exposure Gain and Shutter Speed below.
11 Exposure Gain	Select the exposure Gain of the IP camera. The higher the value = brighter images.
12 Shutter Speed	Increase or decrease the shutter speed. The closer the number is to 1, the better nighttime performance is, although this also causes motion blur to the video.
AGC Gain (In auto Exposure mode only)	When exposure mode is auto, IP camera will adjust its shutter speed according to AGC gain and the Maximum auto shutter speed. Higher AGC gain = brighter images.
13 Maximum Auto Shutter Speed (In auto Exposure mode only)	When exposure mode is auto, IP camera will adjust its shutter speed according to AGC gain and the Maximum auto shutter speed. This setting is to set the maximum shutter speed range of this camera.
14 Flickless Mode	Change settings between 60Hz or 50Hz, depending on the AC power type of your region.

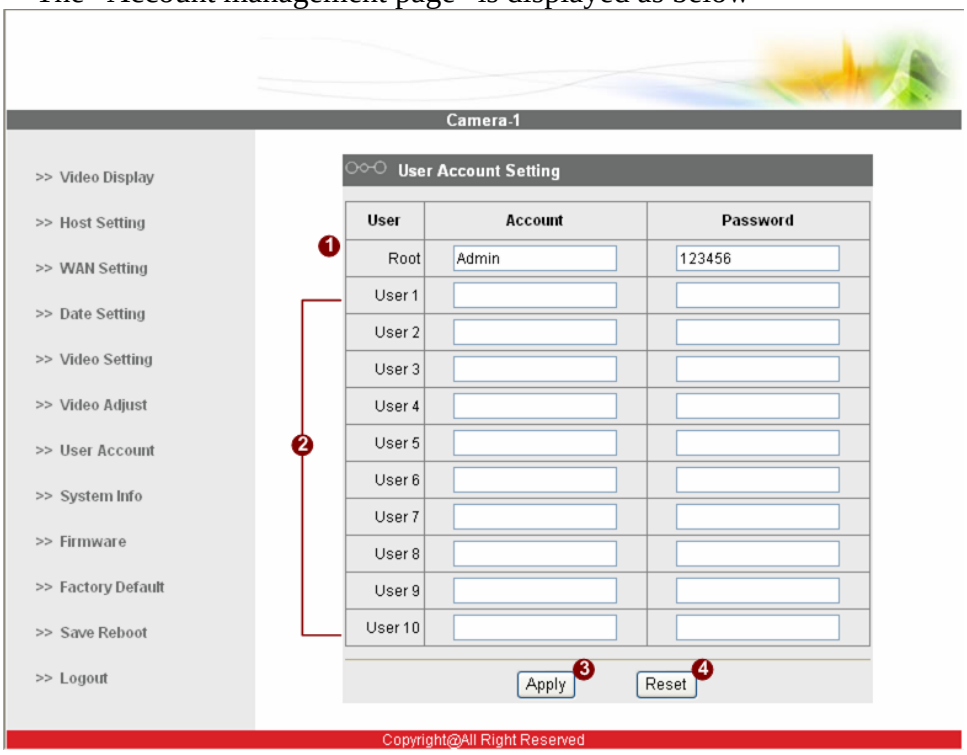
STEP2: Click the 5 [Apply] button of each setting to confirm the settings or click the 6 [Reset] button to re-enter the parameters.

1.3.8 User Account Management

This section tells you how to setup the accounts.

- **STEP1**: Click the [User account] on the “Main Setup page”.

The “Account management page” is displayed as below



- **STEP2**: Setup the account names and their respective passwords.

  There are ❶ 1 root (administrator) account and ❷ 10 common user accounts. Administrator account allows the user to watch the live view and setup everything; but common user account allows user only to watch the live image.

- **STEP3**: Click the ❸ [Apply] button of each setting to confirm the settings or click the ❹ [Reset] button to re-enter the parameters.

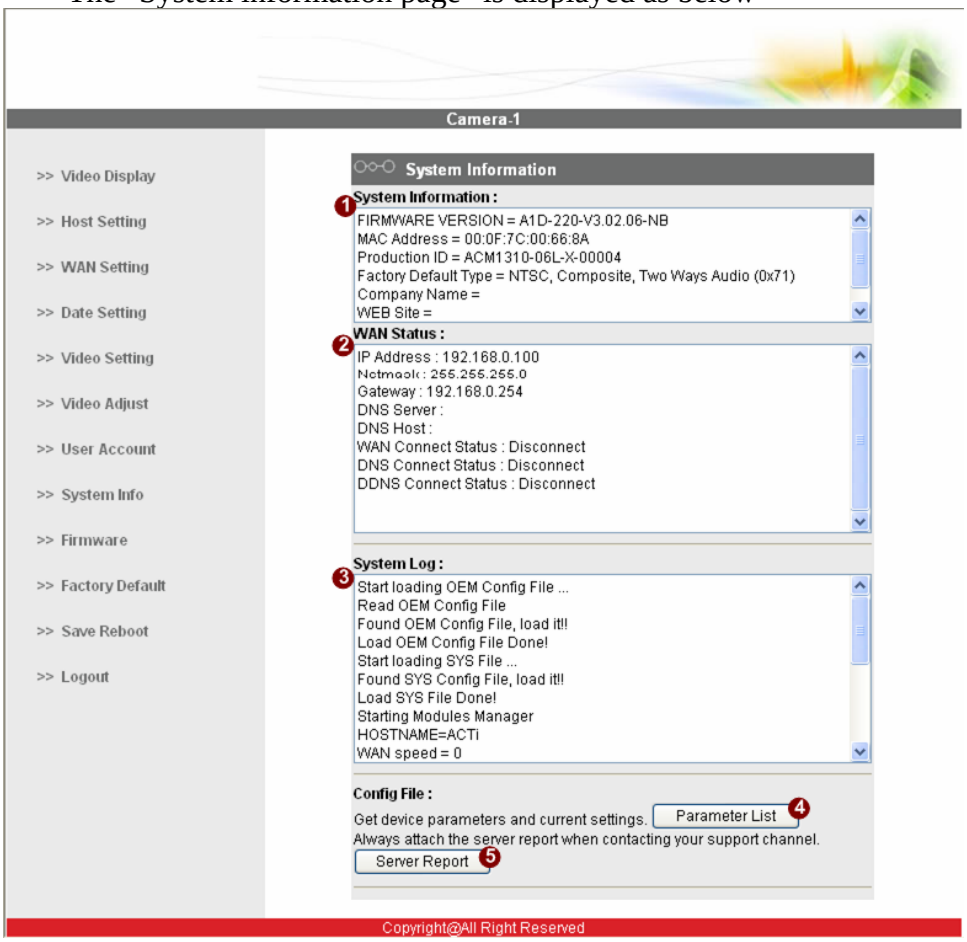
NOTE: Once finished all settings, be sure to click the [Save Reboot] button, otherwise, some settings won’t take effect.

1.3.9 System Info

This section tells you how to see the system information of this IP device including system information, WAN status and system log.

- **STEP1**: Click the [System info] on the “Main Setup page”.

  The “System information page” is displayed as below



- **STEP2**: View the information at the 3 columns. This information is very useful to understand the IP device status and to resolve any problem that might occur.

■System info

Column	Description
❶ System info	It shows the firmware version, MAC address, production ID, and factory default type of IP device.
❷ WAN status	It shows the WAN port’s IP address, netmask, gateway, DNS server, DDNS host and connection status.
❸ System log	It shows the system event. This column is very useful to as a diagnostic tool.

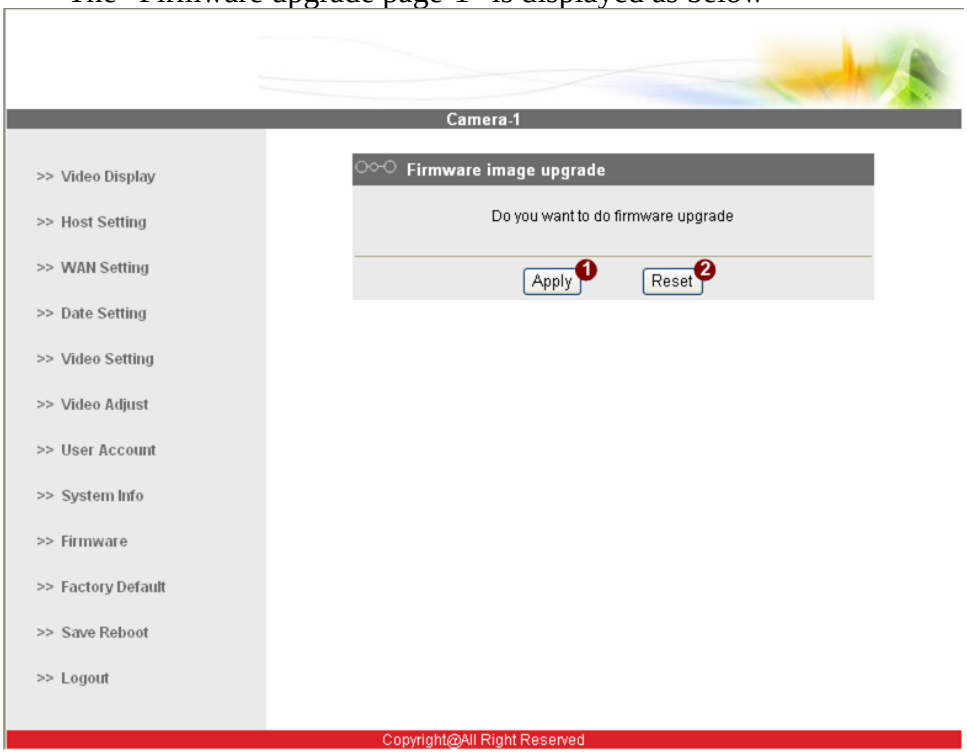
- **STEP3**: Click 4 [Parameter List] where you may see all configurations of the IP device.
- **STEP4**: Click 5 [Server Report] to export related information of the IP device while reporting a support to your support channel.

1.3.10 Firmware Upgrade

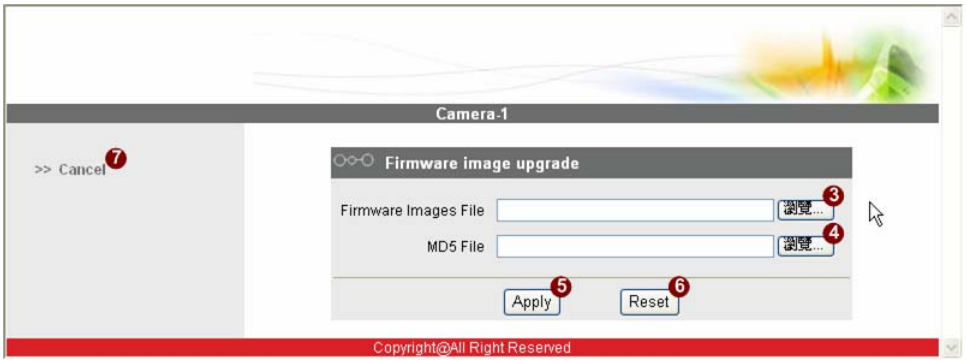
This section tells you how to see update IP device's firmware. You can always visit our web site for the latest firmware.

- **STEP1**: Click the [Firmware] on the "Main Setup page".

  The "Firmware upgrade page-1" is displayed as below



- **STEP2**: Click ❶[Apply] button. The ''firmware upgrade page-2" will be displayed as below.



■Date Setting

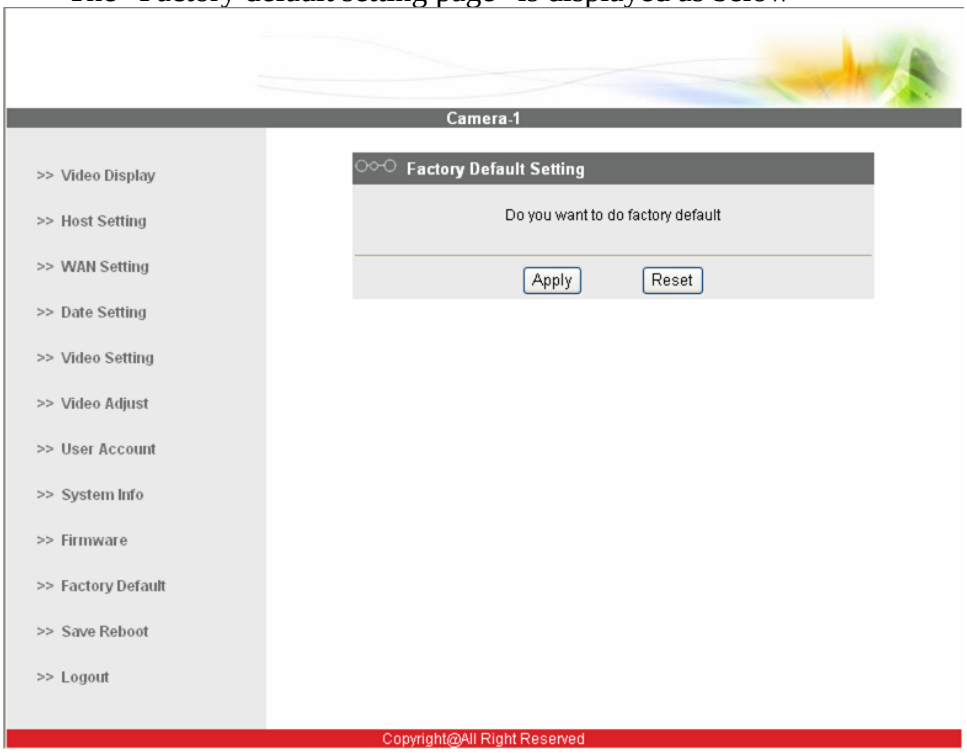
Parameters	Description
❸ Firmware images file	You can upload the firmware images here. Click the [browse] to select the an image file and click the [enter].

1.3.11 Factory Default

This section tells you how to see load IP device's factory default setting.

- **STEP1**: Click the [Factory Default] on the "Main Setup page".

  The "Factory default setting page" is displayed as below



- **STEP2**: Click the [Apply] button to go to loading confirmation page or click the [Reset] button to exit to previous page.

- **STEP3**: A confirmation page will be displayed. Click the [Save Reboot] button to start loading factory default settings.

1.3.12 Save Reboot

This section tells you how to save all the settings and reboot this IP device. This is critical because some settings might not take effect before save and reboot.

- **STEP1**: Click the [Save and reboot] on the “Main Setup page”.

  The “Save and reboot page” is displayed as below.

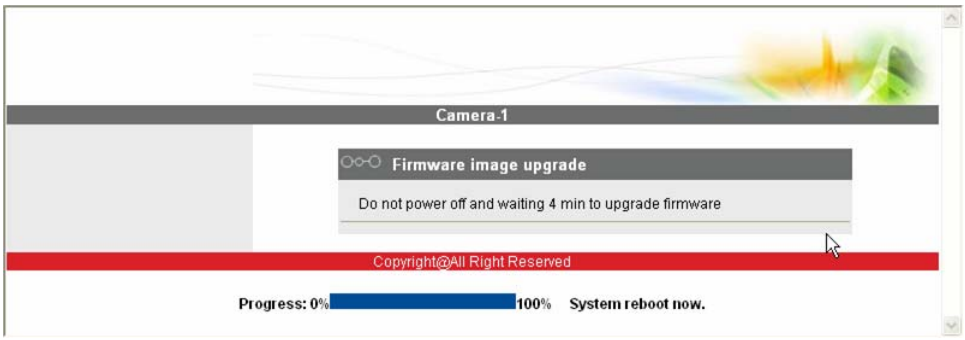
- **STEP2**: The Action LED indicator will light down to indicate that the IP device is rebooting. After around 30 seconds, the Action LED will light up again to indicate that the reboot is completed.

	You can always get the latest version at our website.
❹ MD5 file	You can upload the MD5 file here. Click the [browse] to select an MD5 file and click the [enter]. You can always get the latest version at our website.

NOTE: The version of the firmware image and the MD5 file to be uploaded must be the same, otherwise, the firmware upgrading will fail and the IP device will continue using previous firmware version.

- **STEP3**: Click the ❺[Upload] button to start upgrading, or click the ❻ [Reset] to re-select the files, or select ❼ to cancel the process.

- **STEP4**: The upgrade process window shows a progress bar indicating upgrade status. When the upgrading is completed, the system will reboot.



1.3.13 Logout

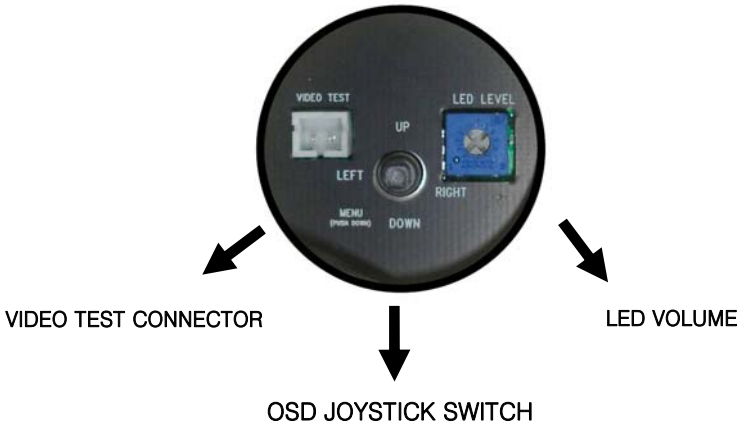
This section tells you how to logout the IP device. Be sure to logout this IP device once your setting is completed.

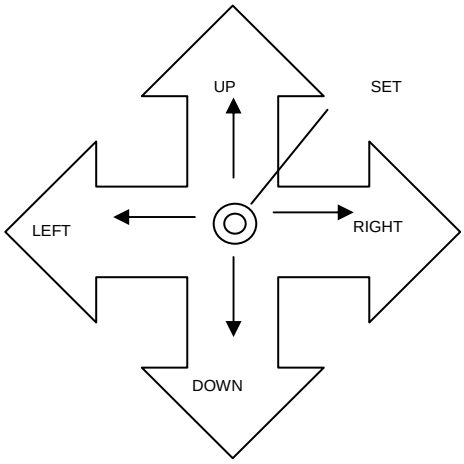
- **STEP1**: Click the [Logout] on the “Main Setup page”.

  You will logout and return to the “Login Page” displayed as below**.**

2. Camera Configuration

■ Internal Components





Push the Joy stick for one second, and the OSD appears on the screen. Move the Joy Stick up, down, left & right to control the OSD functions.

■ Function

- LENS
  - DC
  - MANUAL
- SHUTTER
  - AUTO
  - FLK
  - FIXED
  - MANUAL
- BLC
  - OFF
  - ON
- AGC
  - OFF
  - ON
- WHITE BAL.
  - ATW
  - AWB
  - FIXED
  - MANUAL
- FUNCTION
  - RETURN
  - CAMERA ID
    - ON
    - OFF
  - MIRROR
    - ON
    - OFF
  - DAY / NIGHT
    - COLOR
    - AUTO
    - B/W
  - MOTION DET
    - ON
    - OFF
  - PRIVACY
    - ON
    - OFF
  - GAMMA
    - 0.05~1.00
    - USER
  - LANGUAGE
    - ENGLISH
    - 한국어
    - 汉语
    - 漢語
    - 日本語
  - RESET
- ADJUST
  - CONTRAST
  - SHARPNESS
  - CB_GAIN
  - CR_GAIN
  - RETURN
- RETURN

2.1 Product Specification

IMAGING	Image Sensor		1/3" Sony Super-HDD CCD, 410,000 pixels	
	Effective Pixel	NTSC	768(H)*494(V)	
		PAL	755(H)*582(V)	
	Horizonal resolution		540 TV Lines	
	Minimum Illumination		0.00 Lux(LED ON)	
	S/N Ratio		50dB(Weight On)	
	IR DISTANCE		2.8~11mm(9~22mm)-40M (48LED)/5~50mm-80M (10GIANT LED)	
	Scanning System		2:1 Interlaced 525 Lines / 60Fields / 30Frames	
	Synchronization		Internal	
	Compression		MPEG-4 SP Compliant	
	Gain Control		On / Off	
	Electric Shutter Speed		1/60 ~ 1/120,000sec	
	Back Light Compenstion (BLC)		Auto / Off	
	White Balane		W-ATW / FIXED / MANUAL	
	Maximum Aperture Ratio		1:1.3~2.0	
	Image Sizes (NTSC/PAL)		720*480 624*480 352*240 176*120	720 * 576 624 * 576 352 * 288 176 * 144
	Image Frame Rate		Up to 8 fps @ SXGA Up to 10 fps @ HS720 Up to 30 fps @ VGA	Up to 8 fps @ SXGA Up to 10 fps @ HS720 Up to 30 fps @ VGA
CONTROL	Auto D/N		YES	
	On Screen Display(O.S.D)		Built-in	
	Motion Detection		Yes	
	Software	Web Viewer	Microsoft Internet Explorer 6.0 or above	
		Security	Password Protection: Configured by the Administrator	
	Network	Protocols	HTTP, FTP, SMTP, TCP, IP, DHCP, ICMP, NTP, DNS, DDNS,UDP, PPPoE,RTP,RTSP,IGMP,ARP,3GPP	
		Ethernet	Ethernet(10/100 Base-T), RJ45 Connector	
PHYSICAL	Audio	Bi-Directional	Yes	
		Compression	8kHz, Mono, PCM	
	Video Output		1.0 Vp-p 75 ohm Composite	
	Dimension		100(ϕ) * 296mm(L)	
	Power Source		DC 12V / POE(802.3af support)	
	Power Consumption (Max.)		4.8W	
	Operational Temperature		-10 deg ~ +50 deg C RH95% MAX(14 deg F to 122 deg F)	
	Weight		1.5kg	